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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Guenter Dobler

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EXAMINER

NOLAN, PETER D

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,978	DOBLER ET AL.	
	Examiner	Art Unit	
	Peter D. Nolan	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 2/21/2006 has been received and placed of record in the file.

Claim Objections

2. Claims 13, 14, 17, 19 are objected to because of the following informalities:
3. In claim 13, lines 4-5, the phrase "the collected data" should be corrected to "collected data" because the collected data lacks antecedent basis.
4. In claim 13, line 5, the phrase "the subsystem for information the outputting" should be corrected to "the subsystem for outputting the information".
5. In claim 14, line 3, the phrase "the drive" should be changed to "a driver" to correct antecedent basis and misspelling problems.
6. In claim 17, line 2, the phrase "the valuation and control unit" should be corrected to "the evaluation and control unit".
7. In claim 19, line 1, the phrase "The vehicle information output" should be corrected to "The vehicle information output system".

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13-21, 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 6957128 B1) in view of Morrow (D. Morrow, "Collaboration in Controller-Pilot Communication," In Proc. NASA/FAA/Air Force Methods and Metrics of Voice Communication Workshop, May 1994).

Regarding claim 13, Ito teaches a vehicle information output system (**see Ito Abstract; figures 1-3; column 12, line 19 thru column 13, line 60**) comprising a subsystem for sensing driving state and/or state of the surroundings of the vehicle (**see Ito figure 2, sensor group 5 and column 13, line 61 thru column 14, line 26**), a subsystem for outputting of information using at least two sensory channels (**see Ito figures 1 and 2, indicator group 7 and column 13, lines 50-60**), an evaluation and control unit for processing and evaluating the collected data, and for actuating the subsystem for information the outputting as a function of the data evaluation with at least one of the at least two sensory channels selectable for the information outputting (**see Ito figures 1 and 2, Message Management System (MMS) 11 and column 12, line 19 thru column 13, line 40**), wherein the evaluation and control unit is configured to evaluate the collected data to determine whether a collision with outputting of a second information item occurs with the sensory channel selected for outputting a first information item (**see Ito column 14, line 62 thru column 15, line 4**), and when a collision is detected changes over the sensory channel to output the first or the second

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information item (**see Ito column 18, lines 22-34**) and the information item with a higher priority is output first (**see Ito column 14, line 62 thru column 15, line 4**).

However, while Ito teaches where the length of a message is considered when outputting it (**see Ito column 17, lines 23-24**) it does not teach where if the first and the second information item is output using the same sensory channel, a time required for outputting the first and second information items is determined, and the outputting of the information item with the longer time requirement is delayed compared to the outputting of the information item with the shorter time requirement and where if the time requirements are the same, the information with the highest priority is output first.

Morrow teaches where longer duration messages presented to an operator of a vehicle (in this case an aircraft) require greater cognitive resources than shorter duration messages (**see Morrow pages 6-10**). Therefore if two messages are to be presented to a vehicle operator, it would be obvious to one skilled in the art to present the shorter message first because the information contained therein can be processed more efficiently and the operator is given more time to process the longer message, whereas reversing the order could result in the operator processing the information contained in the longer message while the shorter message is being presented. It follows that if the messages are of same duration, then the default operation taught in Ito would control the outputting based on the message priority because this ensures that more important messages are output first (**see Ito column 14, lines 62 thru column 15, line 4; column 17, lines 33-58; column 20, lines 17-29**).

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Regarding claim 14, Ito, as modified by Morrow in claim 13, teaches where the changeover of the sensory channel for the outputting of information can be indicated to the driver at least one of visually, audibly, haptically and olfactorily (**see Ito column 18, lines 22-34**).

Regarding claim 15, Ito, as modified by Morrow in claim 13, teaches where a preferred sensory channel for the outputting of information from a vehicle subsystem can be preset by the at least one of the driver and the vehicle manufacturer (**see Ito column 17, line 6 thru column 18, line 34**).

Regarding claim 16, Ito, as modified by Morrow in claim 13, teaches where the evaluation and control unit selects the preferred sensory channel for outputting this information item if, during the collision evaluation, no collision with other information outputs is detected (**see Ito column 18, lines 22-34**).

Regarding claim 17, Ito, as modified by Morrow in claim 13, teaches where the evaluation and control unit is configured to determine, from the collected data, load states of the driver with respect to the at least two sensory channels and to select at least one sensory channel for the outputting of information as a function of the determined load (**see Ito column 14, lines 13-36**).

Regarding claim 18, Ito, as modified by Morrow in claim 13, does not specifically teach where, after the collision has been eliminated, the evaluation and control unit resets the preferred sensory channel for the outputting of future information from the associated vehicle subsystem.

However, it would be obvious to one skilled in the art to reset the default sensory channel in Ito, as modified by Morrow, after the collision has been eliminated because the default channel may be more suitable for conveying the particular information to the driver (**see Ito column 17, lines 4-32**).

Regarding claim 19, Ito, as modified by Morrow in claim 13, does not specifically teach where, after the load has been eliminated, the evaluation and control unit resets the preferred sensory channel for the outputting of future information from the associated vehicle subsystem.

However, it would be obvious to one skilled in the art to reset the default sensory channel in Ito, as modified by Morrow, after the collision has been eliminated because the default channel may be more suitable for conveying the particular information to the driver (**see Ito column 17, lines 4-32**).

Regarding claim 20, Ito, as modified by Morrow in claim 13, teaches where the first information item which is to be output is from a navigation system which, with respect to the outputting of information, is moved forward in terms of timing or delayed compared to second information items to be output by other vehicle systems (**see the rejection of claim 13 above regarding the order of information output based on the information duration. In the operation of the system taught in Ito, as modified by Morrow, if the navigation information is longer than the other information item, it will be delayed, whereas if the navigation information is shorter than the other information item, it will be output first**).

Regarding claim 21, Ito, as modified by Morrow in claim 13, teaches where the navigation information is output with a delay compared to fault messages and is output brought forward in terms of timing compared to an incoming telephone call (**see the rejection of claim 13 above regarding the order of information output based on the information duration. In the operation of the system taught in Ito, as modified by Morrow, if the navigation information is longer than the fault message, it will be delayed, whereas if the navigation information is shorter than the telephone call, it will be output first**).

Regarding claim 23, Ito teaches a vehicle information output process (**see Ito Abstract; figure 1**), comprising sensing at least one of a driving state and state of vehicle surroundings (**see Ito figure 1 and column 13, line 61 thru column 14, line 26**), processing and evaluating the collected data (**see Ito figure 1 and column 13, lines 50-60; column 18, lines 22-34**), selecting at least one sensory channel as a function of the evaluated data (**see Ito figure 1 and column 12, line 19 thru column 13, line 40**), and outputting information about the selected sensor channel, wherein the collected data is evaluated to determine whether a collision with outputting of a second information item occurs with the sensory channel selected for outputting a first information item (**see Ito column 14, line 62 thru column 15, line 4**), and (a) when a collision is detected, changes over the sensory channel to outputting the first or the second information item (**see Ito column 18, lines 22-34**) and the information item with a higher priority is output first (**see Ito column 14, line 62 thru column 15, line 4**).

However, while Ito teaches where the length of a message is considered when outputting it (**see Ito column 17, lines 23-24**) it does not teach where if the first and the second information item is output using the same sensory channel, the time required for outputting the first and second information items is determined and the outputting of the information item with a longer time requirement is delayed compared to the outputting of the information item with a shorter time requirement such that, if the time requirements are the same, the information item with a higher priority is output first.

Morrow teaches where longer duration messages presented to an operator of a vehicle (in this case an aircraft) require greater cognitive resources than shorter duration messages (**see Morrow pages 6-10**). Therefore if two messages are to be presented to a vehicle operator, it would be obvious to one skilled in the art to present the shorter message first because the information contained therein can be processed more efficiently and the operator is given more time to process the longer message, whereas reversing the order could result in the operator processing the information contained in the longer message while the shorter message is being presented. It follows that if the messages are of same duration, then the default operation taught in Ito would control the outputting based on the message priority because this ensures that more important messages are output first (**see Ito column 14, lines 62 thru column 15, line 4; column 17, lines 33-58; column 20, lines 17-29**).

Regarding claim 24, Ito, as modified by Morrow in claim 23, teaches where, in order to select the sensory channel for the outputting of information from the collected data, load states of the vehicle with respect to the sensory channels are determined,

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wherein the sensory channel with the smallest load state is selected for the outputting of information (**see Ito column 14, lines 13-36; column 17, lines 4-32; column 18, lines 22-34**).

Regarding claim 25, Ito, as modified by Morrow in claim 23, teaches where the change of the sensory channel for outputting information is indicated to the driver at least one of visually, audibly, haptically and olfactorily (**see Ito column 18, lines 22-34**).

Regarding claim 26, Ito, as modified by Morrow in claim 23 teaches where, in order to select the sensory channel for the outputting of information from the collected data, load states of the vehicle with respect to the sensory channels are determined, wherein the sensory channel with the smallest load state is selected for the outputting of information (**see Ito column 14, lines 13-36; column 17, lines 4-32; column 18, lines 22-34**).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 6957128 B1) in view of Morrow (D. Morrow, "Collaboration in Controller-Pilot Communication," In Proc. NASA/FAA/Air Force Methods and Metrics of Voice Communication Workshop, May 1994) and further in view of Kato et al. (US 5809447).

Regarding claim 22, Ito, as modified by Morrow in claim 13, does not teach where the evaluation and control unit continuously evaluates the information from the navigation system in order to adapt the information to a change in timing of the outputting process.

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Kato teaches where the information outputted by a navigation system is continuously evaluated in order to adapt the information to a change in timing of the outputting process (**see Kato column 4, lines 4-50**).

It would be obvious to one skilled in the art to adapt the delayed information in Ito, as modified by Morrow, in the manner taught in Kato because this would ensure that the information outputted by the navigation system is correct at the time it is received by the driver.

Conclusion

Any inquiry concerning this or any earlier communication from the examiner should be directed to Examiner Peter Nolan, whose telephone number is 571-270-7016. The examiner can normally be reached Monday-Friday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached at 571-272-6956. The fax number for the organization to which this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D Nolan/

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Examiner, Art Unit 3661

7/6/2009

/Thomas G. Black/

Supervisory Patent Examiner, Art Unit 3661